

TEIGNBRIDGE LOCAL PLAN : SHUTTERTON BRIDGE, DAWLISH**AGRICULTURAL LAND CLASSIFICATION****Report of Survey****1. SUMMARY**

Fifteen hectares of land at Shutterton bridge, Dawlish was surveyed using the Agricultural Land Classification (ALC) System in June 1992. The survey was carried out on behalf of MAFF as part of its statutory role in the preparation of the Teignbridge Local Plan. Part of the area surveyed is subject to a planning application. This area covers four and a half hectares in the south west part of the area.

The fieldwork was carried out by ADAS (Resource Planning Team, Taunton Statutory Unit) at a scale of 1:10,000. The information is correct at this scale but any enlargement would be misleading. Details of the findings of the survey and the distribution of grades are detailed below.

Distribution of ALC grades: Shutterton Bridge, Dawlish

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
1	11.5	72.8	87.0
2	3.3	20.9	<u>23.0</u>
Non Agric	<u>1.0</u>	<u>6.3</u>	100% (14.8ha)
TOTAL	15.8	100%	

All of the agricultural land surveyed is of best and most versatile quality. The soils are well drained.

Distribution of ALC grades: Application area, Shutterton Bridge

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
1	4.5	100	100

All of the application area has been classified as Grade 1. These soils have no limitations and are of excellent quality.

2. INTRODUCTION

Fifteen hectares of land at Shutterton bridge, Dawlish was surveyed using the Agricultural Land Classification (ALC) System in June 1992. The survey was carried out on behalf of MAFF as part of its statutory role in the preparation of the Teignbridge Local Plan. Part of the area surveyed is subject to a planning application. This area covers four and a half hectares in the south west part of the area.

The fieldwork was carried out by ADAS (Resource Planning Team, Taunton Statutory Unit) at a scale of 1:10,000 (approximately one sample point every hectare). The information is correct at this scale but any enlargement would be misleading. A total of 15 auger sample points and one soil profile pit were examined.

The published Provisional one inch to the mile ALC map of this area (MAFF 1973) shows the site to be Grade 1 with some Grade 4 in the central area. The recent survey supersedes this map having been carried out at a more detailed level and using the Revised Guidelines and Criteria for grading the quality of agricultural land (MAFF 1988). These guidelines provide a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use. The grading takes account of the top 120cm of the soil profile. A description of the grades used in the ALC System can be found in Appendix 2.

3. CLIMATE

The grade of the land is determined by the most limiting factor present. The overall climate is considered first because it can have an overriding influence on restricting land to a lower grade despite other favourable conditions.

Estimates of climatic variables were obtained for each site by interpolation from the Agricultural Climate Dataset (Meteorological Office 1989). The data are shown in Table 1.

The parameters used for assessing overall climatic limitations are accumulated temperature, (a measure of the relative warmth of a locality) and average annual rainfall, (a measure of overall wetness). Climatic data on Field Capacity Days (FCD) and Moisture Deficits for wheat (MDW) and potatoes (MDP) are also shown. These data are used in assessing the soil wetness and droughtiness limitations referred to in later sections.

Table 1 Climatic Interpolation: Shutterton Bridge

Grid Reference	SX 965 788
Altitude (m)	15
Accumulated Temperature (deg days)	1588
Average Annual Rainfall	893
Overall Climatic Grade	1
Field capacity (Days)	184
Moisture Deficit, Wheat (mm)	106
Potatoes (mm)	99

4. RELIEF AND LANDCOVER

The site is gently sloping and at an average altitude of 10m AOD. At the time of survey all of the agricultural land had been ploughed. There were two areas of non agricultural land.

5. GEOLOGY AND SOILS

The geology of the site is shown on the published 1:50,000 scale solid and drift geology map, sheet 339 (Geological Survey of England and Wales 1976). Similarly, the soils were mapped by the Soil Survey of England and Wales in 1983 at a reconnaissance scale of 1:250,000.

The site is predominantly Dawlish Sandstone with an area of alluvium running north south in the centre of the site.

The soils are mapped as the Bridgnorth Association. These soils are described as well drained sandy and coarse loamy soils over soft sandstone.

The recent surveys found the soils to be typical of the mapped Association, with sandy well drained soils throughout.

6. AGRICULTURAL LAND CLASSIFICATION

The distribution of ALC grades identified in the survey area is detailed in Table 2 and shown on the accompanying ALC map. The information is correct at the scale shown but any enlargement would be misleading.

Table 2 Distribution of ALC grades: Shutterton Bridge, Dawlish

Grade	Area (ha)	% of Survey Area	% of Agricultural Land
1	11.5	72.8	87.0
2	3.3	20.9	<u>23.0</u>
Non Agric	<u>1.0</u>	<u>6.3</u>	100% (14.8ha)
TOTAL	15.8	100%	

Grade 1

A block of Grade 1 land has been mapped at the west end of Shutterton Lane. These soils are well drained slightly stony and light in texture. The topsoil texture here is a medium sandy loam. The texture of the soil becomes slightly heavier with depth. These soils have sufficient available water for crop growth and can be Grade 1.

Grade 2

A smaller area of Grade 2 has been mapped within the Grade 1 block. These soils are similar but become stonier with depth. This reduces the available water for crops and that available is sufficient for the soils to be Grade 2. These soils have medium sandy loam textures throughout the profile. A soil profile pit was dug in these soils to examine the subsoil structure in more detail.

Other Land

Land in the centre of the site not in agricultural use and a small area associated with an old building have been mapped as non agricultural.

APPENDIX 1

REFERENCES

GEOLOGICAL SURVEY OF ENGLAND AND WALES (1976) Solid and drift edition. Sheet 339 Newton Abbot, 1:50,000 scale

MAFF (1973) Agricultural Land Classification Map sheet 188 Provisional 1:63,360 scale

MAFF (1988) Agricultural Land Classification of England and Wales (Revised guidelines and criteria for grading the quality of agricultural land) Alnwick

METEOROLOGICAL OFFICE (1989) Published climatic data extracted from the agroclimatic dataset, compiled by the Meteorological Office

SOIL SURVEY OF ENGLAND AND WALES (1983) Sheet 5 Soils of South west England 1:250,000

SITE NAME Shutterton Bridge		PROFILE NUMBER Pit 1		SLOPE AND ASPECT 0°		LAND USE Ploughed		Av Rainfall: 893 mm ATO: 1588 Deg Day		PARENT MATERIAL Dawlish Sandstone			
JOB NO. 43/92		DATE 18/6/92		GRID REFERENCE SX 967 788		DESCRIBED BY GMS/JC		FC Days: 184 Climatic Grade: 1					
Horizon Number	Lowest Av Depth (cm)	Matrix and Ped Face Colours	Texture	Stoniness: Size, Shape, Type, and Field Method	Mottling Abundance, Contrast, Size and Colour	Structure: Development Size and Shape	Pores and Fissures	Structural Condition	Consistence	Roots: Abundance, Size and Nature	Calcium Carbonate Content	Mangan Concs etc	Horizon Boundary: Distinctness
1	25	7.5YR34	MSL	0% visual	none								
2	45	7.5YR34	MSL	5% HR sieved	none	MCSAB	Good	Moderate	Friable				
3	60	5YR44	MSL	34% HR sieved/dspl	none	WFSAB	Good	Moderate	Friable				
4	100+	5YR44	MSL	48% HR sieved/dspl	none			Good					
Profile Gleyed From: none				Available Water		Wheat: 112mm				Final ALC Grade: 2			
Depth to Slowly Permeable Horizon: not						Potatoes: 96mm				Main Limiting Factor(s): Droughtiness			
Wetness Class: I				Moisture Deficit		Wheat: 106mm							
Wetness Grade: 1						Potatoes: 99mm							
				Moisture Balance		Wheat: +6mm							
						Potatoes: -3mm							
				Droughtiness Grade:		2 (to 100cm)				Remarks: Pit dug to 100cm			